



UNITED STATES PATENT AND TRADEMARK OFFICE

HLA

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/766,055 | 01/28/2004 | Ronnie L. Bell | 18133-219 | 2277 |
| 30623 | 7590 | 10/31/2006 | EXAMINER | |
| MINTZ, LEVIN, COHN, FERRIS, GLOVSKY AND POPEO, P.C. ONE FINANCIAL CENTER BOSTON, MA 02111 | | | LEVI, DAMEON E | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2841 | |

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|-----------------------------|--|
| Office Action Summary | Application No. 10/766,055 | Applicant(s) BELL ET AL. | |
| | Examiner Dameon E. Levi | Art Unit 2841 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1,4,5,and 8-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Woolsey et al US Patent 7042737.

Regarding claim 1, Woolsey et al discloses an assembly comprising:

a chassis(element 102, Figs 1-12) configured to mount to an equipment rack, the chassis including: an electrically-conductive buss(element 108, Figs 1-12);

an electrically-conductive ground member(element 126, Figs 1-12) coupled to the buss and configured and disposed to be connected to a grounding mechanism; and a plurality of electrically-conductive bias members(element 132, Figs 1-12) coupled to the buss; and

Art Unit: 2841

a plurality of surge-protection modules(element 106, Figs 1-12) configured to be removably inserted into and coupled to the chassis, the modules each including a printed circuit board(element 112, Figs 1-12) and a plurality of receptacles(element 116, Figs 1-12) for receiving connectors and coupling the connectors to the circuit board,

the circuit boards each including a grounding contact portion and surge protection circuitry(column 5, lines 8-22) ;

wherein the chassis and the modules are configured such that the circuit boards are disposed between respective bias members when inserted in the chassis, with the grounding contact portion of each circuit board in electrical contact with at least a respective one of the bias members(see elements 102,108,106,132, Figs 1-12, see column 5, lines 8-22).

Regarding claim 4, Woolsey et al discloses wherein the grounding contact portions of the printed circuit boards extend at least as far as a distance between locations where the bias members contact the circuit boards the modules are fully inserted into the chassis(see elements 112,132, Figs 1-12).

Regarding claim 5, Woolsey et al discloses wherein at least one of the module and the chassis includes a member(see elements 136,134, Figs 1-12) for interfering with the other of the module and the chassis with the module received by the chassis to inhibit separation of the module from the chassis.

Regarding claim 8, Woolsey et al discloses an assembly comprising:

a housing (element 102, Figs 1-12) configured to provide a plurality of openings sized and shaped to receive the modules, and configured to be mounted in the rack;
an electrically-conductive buss(element 108, Figs 1-12) coupled to the housing and extending along a length of the housing;
an electrically-conductive ground member(element 126, Figs 1-12) coupled to the buss and configured and disposed to be connected to a grounding mechanism; and
a plurality of electrically-conductive bias members(element 132, Figs 1-12) coupled to the buss and configured and disposed to contact and be biased against portions of respective circuit boards(element 112, Figs 1-12) of the modules with the modules received by the chassis.

Regarding claim 9, Woolsey et al discloses wherein the bias members are disposed in opposing pairs(element 132, Figs 1-12).

Regarding claim 10, Woolsey et al discloses wherein two pairs of the bias members(element 132, Figs 1-12) are disposed to receive each circuit board.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14-24 are rejected under 35 U.S.C. 102(b) as being anticipated by

Takahashi et al et al US Patent 6552915.

Art Unit: 2841

Regarding claim 14, Takahashi et al discloses a module comprising:

a circuit board(element 43, Figs 1-26C) configured to provide surge-protection between an input and an output; and

a housing(element 41, Figs 1-26C) connected to the circuit board,

the housing defining a plurality of receptacles(element 44, Figs 1-26C) for receiving a plurality of data connectors, the receptacles disposed such that connectors received by the receptacles will electrically couple to the input and the output,respectively,of the circuit board,

the housing including an inhibiting member(elements 49,50 Figs 1-26C)configured and disposed to interfere with a portion of the chassis(element 10, Figs 1-26C) with the module received by the chassis such that separation of the module from the chassis is inhibited.

Regarding claim 15, Takahashi et al discloses wherein the inhibiting member(elements 49,50 Figs 1-26C) is flexible and includes a tab(elements 30e, 90d, Figs 1-26C), the inhibiting member being configured to have the tab urged inwardly by the chassis during insertion of the module into the chassis and to move outwardly when the tab aligns with an opening provided by the chassis such that the tab will interfere with the chassis if the module and chassis are urged to separate.

Regarding claim 16, Takahashi et al discloses wherein the tab is rounded (elements 30e, 90d, Figs 1-26C).

Art Unit: 2841

Regarding claim 17, Takahashi et al discloses wherein the housing includes a plurality of grip portions (elements 49, 50, 91b, Figs 1-26C) configured to be grasped by a user for pulling the housing to separate the module from the chassis.

Regarding claim 18, Takahashi et al discloses wherein the grip portions (elements 91b, Figs 1-26C) provide grooves extending transverse to a direction of insertion of the module into the housing.

Regarding claim 19, Takahashi et al discloses wherein the housing provides two grip portions (elements 49,50,91b, Figs 1-26C) that extend away from a front face of the housing and that are disposed near a top and a bottom of the housing, respectively.

Regarding claim 20, Takahashi et al discloses an assembly comprising:

a chassis (element 41, Figs 1-26C) configured to mount to an equipment rack, the chassis providing a plurality of receptacles(element 44, Figs 1-26C)

the chassis providing a grounding network from an interior of the chassis to a terminal configured to be connected to by an external ground connector(column 7, lines 5-15); and a plurality of modules(element 16, Figs 1-26C) configured to be repeatedly inserted into and removed from the receptacles, the modules each being configured to connect to a plurality of data line connectors, and to provide a surge-protected electrical connection between the plurality of connectors connected to each module(column 6, lines 44-67);

wherein the modules and the chassis are configured such that the modules and the chassis will inhibit separation of the modules and the chassis if the modules are urged to separate from the chassis, and to allow separation of the modules from the chassis

Art Unit: 2841

upon application of at least a threshold separation force(elements 49, 50, Figs 1-26, column 11, lines 44-67).

Regarding claim 21, Takahashi et al discloses wherein the chassis and the modules are configured such that the threshold separation force is at least about 1 pound (column 11, lines 44-67).

Regarding claim 22, Takahashi et al discloses wherein the chassis and the modules are configured such that the threshold separation force is at least about 2 pounds (column 11, lines 44-67).

Regarding claim 23, Takahashi et al discloses wherein the chassis has a height of about 1U(element 41, Figs 1-26C).

Regarding claim 24, Takahashi et al discloses wherein surge protection of different modules is configured differently to provide surge protection for different types of data lines, and wherein the modules each include a visual indication of a type of data line for which the surge protection of the respective module is configured(see column 6, line 60 – column 7, line 12).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2841

Claims 2,3,6,7, and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woolsey et al US Patent 7042737 in view of Takahashi et al US Patent 6552915.

Regarding claim 2, Woolsey et al discloses the instant claimed invention except wherein the chassis is configured with a plurality of guides for guiding the printed circuit boards of the modules into the chassis and in between the bias members.

Takahashi et al discloses an assembly wherein a chassis(element 15, Figs 1-26C) is configured with a plurality of guides (element 30a, Figs 1-26C) for guiding the printed circuit boards of the modules into the chassis and in between the bias members.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included guides in the chassis in the manner as taught by Takahashi et al in the assembly as taught by Woolsey et al as guides are commonly used in the art to provide a channel within a chassis for ease of insertion and extraction of modules placed therein, as well as, provide easy alignment of the modules with connector on a backplane when the module is inserted therein.

Regarding claim 3, Woolsey et al discloses the instant claimed invention except wherein the chassis provides slots with walls of the slots serving as the guides.

Takashi et al discloses an assembly wherein the chassis provides slots with walls of the slots serving as the guides(element 30a, Figs 1-26C).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided slots with walls as taught by Takashi et al in the

Art Unit: 2841

assembly as taught by Woolsey et al as slots are widely used in the art to provide a pathway along a chassis wall for guiding a plug in unit into the chassis.

Regarding claim 6, Woolsey et al discloses the instant claimed invention except wherein each module includes a bias arm for engaging a ledge of the chassis to retain the modules in the chassis.

Takahashi et al discloses an assembly wherein each module includes a bias arm(see elements 49, 50, Figs 1-26C) for engaging a ledge of the chassis to retain the modules in the chassis.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a bias arm on the modules in the manner as taught by Takahashi et al in the assembly as taught by Woolsey et al as bias arms are widely used in the art in order to securely lock a module inserted into a chassis to prevent disconnection therefrom.

Regarding claim 7, Woolsey et al discloses the instant claimed invention except wherein the bias arms are configured to deflect in response to a threshold of force being applied to the modules to permit removal of the modules from the chassis.

Takahashi et al discloses an assembly wherein bias arms(see elements 49, 50, Figs 1-26C) are configured to deflect in response to a threshold of force being applied to the modules to permit removal of the modules from the chassis.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have configured the bias arms in the manner as taught by

Art Unit: 2841

Takahashi et al in the modules as taught by Woolsey et al for the purpose of easily locking and unlocking the module from the chassis(column 11, lines 64-67)

Regarding claim 11, Woolsey et al discloses the instant claimed invention except wherein the housing provides guides for guiding the circuit boards into contact with the bias members.

Takahashi et al discloses an assembly wherein a housing (element 15, Figs 1-26C) provides guides (element 30a, Figs 1-26C) for guiding the circuit boards into contact with the bias members.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included guides in the chassis in the manner as taught by Takahashi et al in the assembly as taught by Woolsey et al as guides are commonly used in the art to provide a channel within a chassis for ease of insertion and extraction of modules placed therein, as well as, provide easy alignment of the modules with connector on a backplane when the module is inserted therein.

Regarding claim 12, Woolsey et al discloses the instant claimed invention except wherein the housing defines a plurality of slots with the walls of the slots serving as the guides.

Takashi et al discloses an assembly wherein a housing defines a plurality of slots with the walls of the slots serving as the guides (element 30a, Figs 1-26C).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided slots with walls as taught by Takashi et al in the

Art Unit: 2841

assembly as taught by Woolsey et al as slots are widely used in the art to provide a pathway along a chassis wall for guiding a plug in unit into the chassis.

Regarding claim 13, Woolsey et al discloses the instant claimed invention except wherein the housing defines a top and a bottom slot for each of the circuit boards. Takahashi et al discloses an assembly wherein a housing(element 15, Figs 1-26C) defines a top and a bottom slot(elements 30a, Figs 1-26C) for each of the circuit boards.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included top and bottom slots in the chassis in the manner as taught by Takahashi et al in the assembly as taught by Woolsey et al as slots are commonly provided on both sidewalls of a chassis to provide a channel therein for ease of insertion and extraction of modules placed therein, as well as, provide easy alignment of the modules with connector on a backplane when the module is inserted therein.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dameon E. Levi whose telephone number is (571) 272-2105. The examiner can normally be reached on Mon.-Fri. (9:00 - 5:00) IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2841

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DEL


10/16/06.
Tran Dinh.

Dameon E Levi
Examiner
Art Unit 2841